MFJ-1272B/BX/BY/BYV/BYH/BZ OWNER'S MANUAL

Thank you for purchasing the MFJ-1272B, MFJ-1272BX, MFJ-1272BYH, MFJ-1272BYV or the MFJ-1272BZ TNC/MICROPHONE Switch. This switch is designed to interface your microphone and TNC to your radio. The MFJ-1272B connects to the MFJ and TAPR 2 clone TNCs and allows simultaneous connection of both the mic and the TNC to the radio. The MFJ-1272BX has a five pin IDC connector for the PK-232 packet TNC. The MFJ-1272BYV has a DB-9 connector for the KAM and the KPC-2. The MFJ-1272BYH has an eight-pin DIN for the HF port of the KAM. The MFJ-1272BZ has an eight-pin MIC connector for connection to the PK-88. You can switch between the mic and TNC by using the push-on/ push-off switch on the front panel.

The MFJ-1272B, et al, microphone switches were designed to be used with Kenwood, Alinco, Icom, Ranger, and Yaesu radios with 8-pin microphone connectors. Other brand radios that are pin for pin identical to these should work fine. Radios that are not compatible, even radios with 4, 5, 6 or 7 pins, can still be used. Re-wiring of these 4, 5, 6, or 7 pin connectors will require putting on a different connector or using an adapter for your microphone and the connector going to the radio. Consult Figure 3 and the Header description before wiring (Figure 4 for the MFJ-1272BX, Figure 5 for the KAM (HF), and Figure 6 for the KAM (VHF) and Figure 7 for the PK-88.

CAUTION: Some mic connectors have voltage on them to power the mics. Please be very careful in hooking up your microphone switch. MFJ Enterprises, INC. will not be responsible for damaged radios and other equipment due to hook-up or header jumper errors.

Exception to the Rules.

Radio manufacturers do not follow rigidly their own standard for their microphone connections. For this reason we have found it necessary to install JUMPER 1 across the 10 uF DC isolation capacitor. This capacitor was originally put in because of hum and distortion on the ICOM IC-735 transceiver. It requires the capacitor, therefor, you will have to remove the jumper at HD2. If you have an ICOM IC-751A, you will need to leave the jumper alone, which will keep the capacitor shorted to ground. Also, the information we have is that the PTT line is Pin 2 instead of the usual Pin 5. Pin 5 of the IC-751A has +8 VDC.

The Kenwood TM-231A is one of those Kenwood radios which has receive audio on the mic connector. As of this date, this is an exception rather than the rule. To take care of this, short pin 20 to pin 13 on HD1.

If you still experience reports of HUM on your voice or packet signal after the above procedure is done, remove the jumper at HD2 AND the 10 uF electrolytic capacitor. This can be done in either of two ways. actually taking a pair of diagonal cutters and cutting the electrolytic out. Or cutting the gray wire from pin 7 on the chassis mounted connector and the pin 7 wire (bare wire) coming out of the radio cable. The best cure for the hum is to have Pin 7 of both the chassis connector (gray wire) and the radio cable (bare wire) tied together and not to anything else.

CAUTION

Always CHECK your radio's owner's manual to see if there is a voltage on one of the pins of the mic before hooking up the microphone switch. Do not connect any pin labeled as a voltage source to PTT!!!!!

==========****** **W A R N I N G** ******==========

MFJ Enterprises,Inc. will not be responsible for damaged radios or associated equipment.

It is your responsibility to make sure your connections will not damage the radio.

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INSTALLATION

Five shorting jumpers are provided in order to configure the switch for your particular radio. Table 1 lists which pins of header HD1 to short according to the radio you have. Refer to Figure 1 for a diagram of the header pin orientation. The jumpers are already placed on header HD1. The factory setting is for Kenwood and Alinco radios. Header HD2 also has a jumper on it. Header HD3 has a jumper on one pin only. Place the jumper across both pins if you want the speaker audio on ALL the time. Do nothing if you want the speaker to be disconnected during packet operation.

I. Kenwood and Alinco radios. (FACTORY SETTING)

A. The MFJ-1272B/X/YV/YH/Z comes configured for Kenwood and Alinco radios. If you have one of these radios, remove the side screws and top. Confirm that the shorting jumpers are on pins 1 and 2, 5 and 6, 11, and 12, and 15 and 16.

B. Connect your radio's microphone to the microphone connector on the front panel of the MFJ-1272B ( ).

C. Connect the 8-pin MIC plug (which exits the rear of the TNC/MIC switch) to the radio.

NOTE: The Kenwood TM-231 has receive audio on pin 6 of the mic connector. No provision is made for this, but you can solder a wire from pin 13 to pin 20 of HD1 to effect receive audio.

II. ICOM and Ranger AR-3500 radios.

A. Remove the two screws holding the top cover on the box.

B. Remove the jumpers and replace on the proper pins. For Icom and Ranger these are pins 1 and 2, 5 and 6, 13 and 14, and 17 and 18.

Note: The Icom IC-751 should have jumper 15-16 ON instead of 17-18 because PTT is on Pin 2 vice Pin 5.

C. Replace the top and screws.

D. Connect your radio's microphone to the microphone connector on the front panel of the MFJ-1272B/X/Y.

E. Connect the 8-pin DIN plug (which exits at the rear of the MFJ-1272B/X switch) to the radio.

If you have reports of distorted audio either from the mic audio or the TNC audio, set the jumper on HD2 opposite what it is currently. That is, if the jumper is now on, take the jumper off. If it is not on, place a jumper clip over the HD2 header.

III. Yaesu radios.

A. Remove the two screws holding on the top cover.
B. Remove the jumpers and place them on pins 3 and 4, 7 and 8, 9 and 10, and 19 and 20.
C. Replace the top and screws.
D. Connect your radio's microphone to the microphone connector on the front panel of the MFJ-1272B/X/Y.
E. Connect the 8-pin MIC plug (which exits the rear of the MFJ-1272B/X/Y switch) to the radio.

IV. Other radios.

Note: The above radios were mentioned because they are different from the "norm". Most Kenwood radios are alike. Most Yaesu radios are alike, and most Icoms are alike.

Radios not specifically mentioned can be used. If your radio's mic connection is identical in wiring to one of the radios mentioned in Table 1 located on the bottom of the box , simply use the same jumpers as that radio. If the wiring is different , you will have to figure out how to connect it. The job may require more effort than it is worth. An example of what you may have to go through is with the AZDEN PCS-6000. This radio uses pin 7 as the PTT line and pin 6 as the common ground. To use the 1272B/X/Y/Z with the AZDEN PCS- 6000, you would have to swap pins 6 and 7 at two places, the mic connector on the MFJ-1272B/X/Y/Z, and the radio 8-pin connector of the 1272B/X/Z. Also, jumpers 1 and 2, 5 and 6, 11 and 12, and 19 and 20 would have to be made.

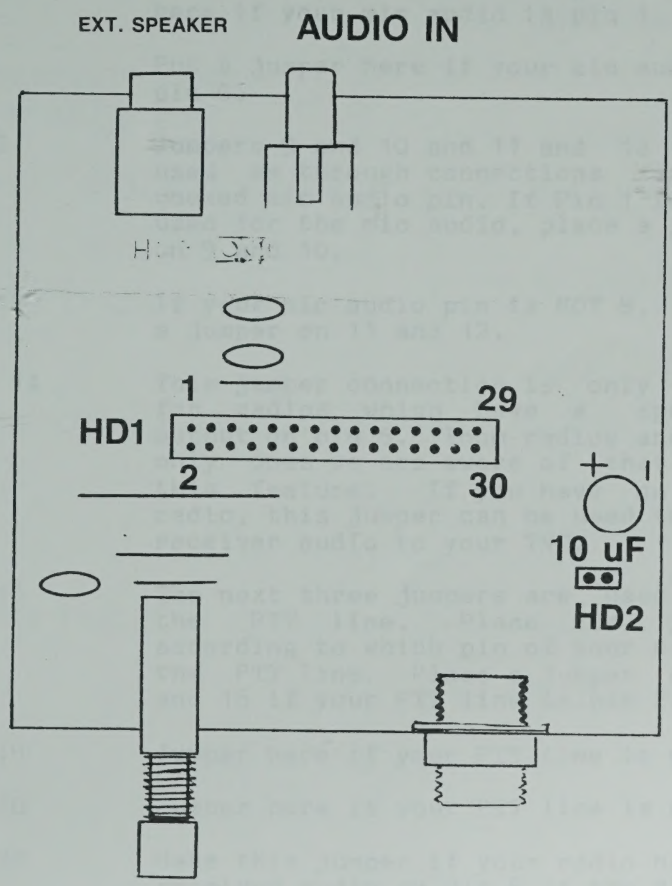
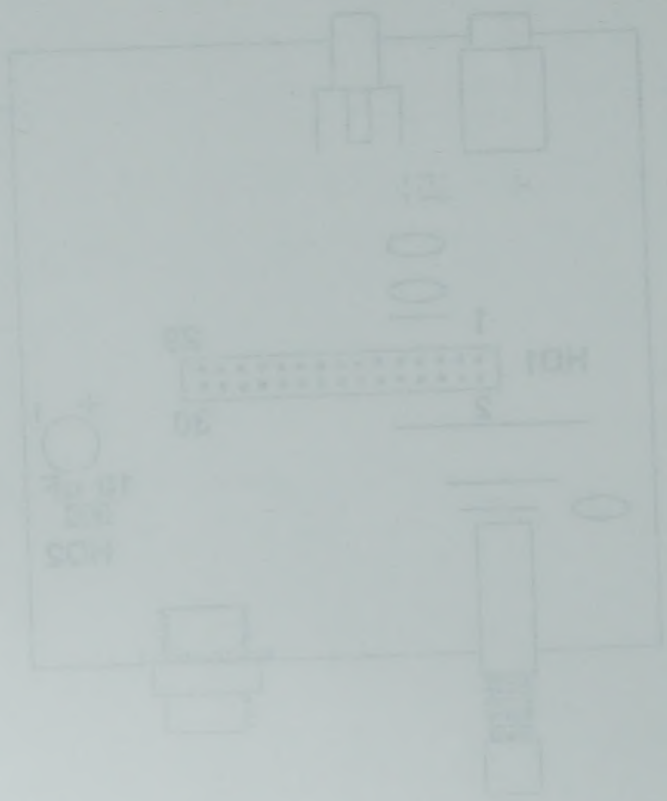


FIGURE 1 PCB COMPONENT LAYOUT (Top View)



DESCRIPTION OF HEADER PINS.

Most of you won't need this information. But those of you who have radios not mentioned will need to know it in order to configure Header HD1 for your particular radio.

HD1 PINS	JUMPER FUNCTIONS
1 - 2	Jumper together pins 1 and 2 if your mic audio is Pin 1.
3 - 4	Place a jumper here if your mic audio is Pin 8.
5 - 6	Your audio has to go out of the 1272B box on pin 1 or pin 8 so put a jumper here if your mic audio is pin 1.
7 - 8	Put a jumper here if your mic audio is pin 8.
9 - 10	Jumpers 9 and 10 and 11 and 12 are used as through connections for the unused mic audio pin. If Pin 1 is NOT used for the mic audio, place a jumper on 9 and 10.
11 - 12	If your mic audio pin is NOT 8, place a jumper on 11 and 12.
13 - 14	This jumper connection is only used for radios which have a speaker output on pin 8. Icom radios are the only ones we are aware of that have this feature. If you have an Icom radio, this jumper can be used to feed receiver audio to your TNC.
15 - 16	The next three jumpers are used for the PTT line. Place the jumper according to which pin of your mic is the PTT line. Place a jumper on 15 and 16 if your PTT line is pin 2.
17 - 18	Jumper here if your PTT line is pin 5.
19 - 20	Jumper here if your PTT line is pin 6.
21 - 22	Make this jumper if your radio has received audio on Pin 6 of the MIC.
23 - 24	Jump here if Pin 3 is RECEIVE AUDIO.
25 - 26	Jump here if Pin 4 is RECEIVE AUDIO.

DESCRIPTION OF HEADER PINS (cont'd)

27 - 28	No Connection
29 - 30	No Connection

Header HD3 is provided in case you wish to always have the speaker connected, even during packet operation. If you want the speaker connected, you will have to open up the box and place the jumper on the header.

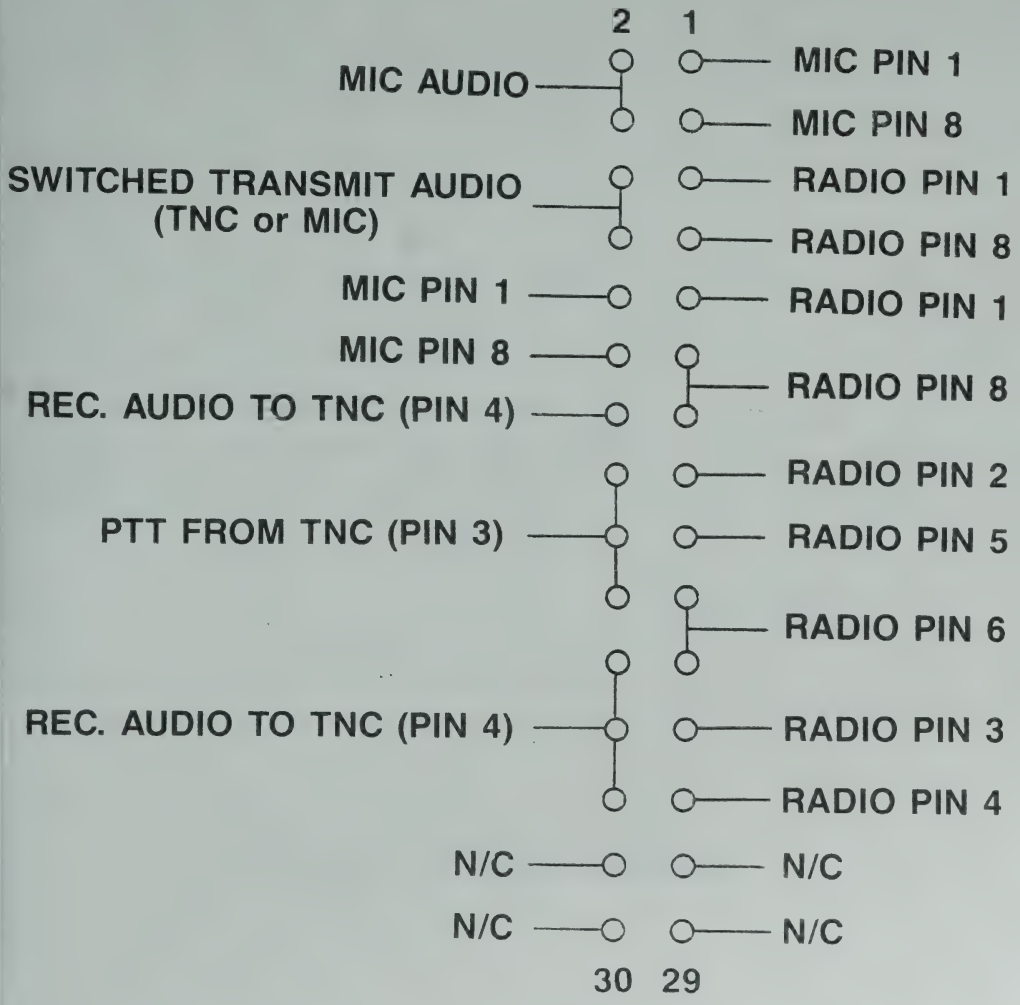


FIGURE 2 - HEADER HD1 PIN IDENTIFICATION

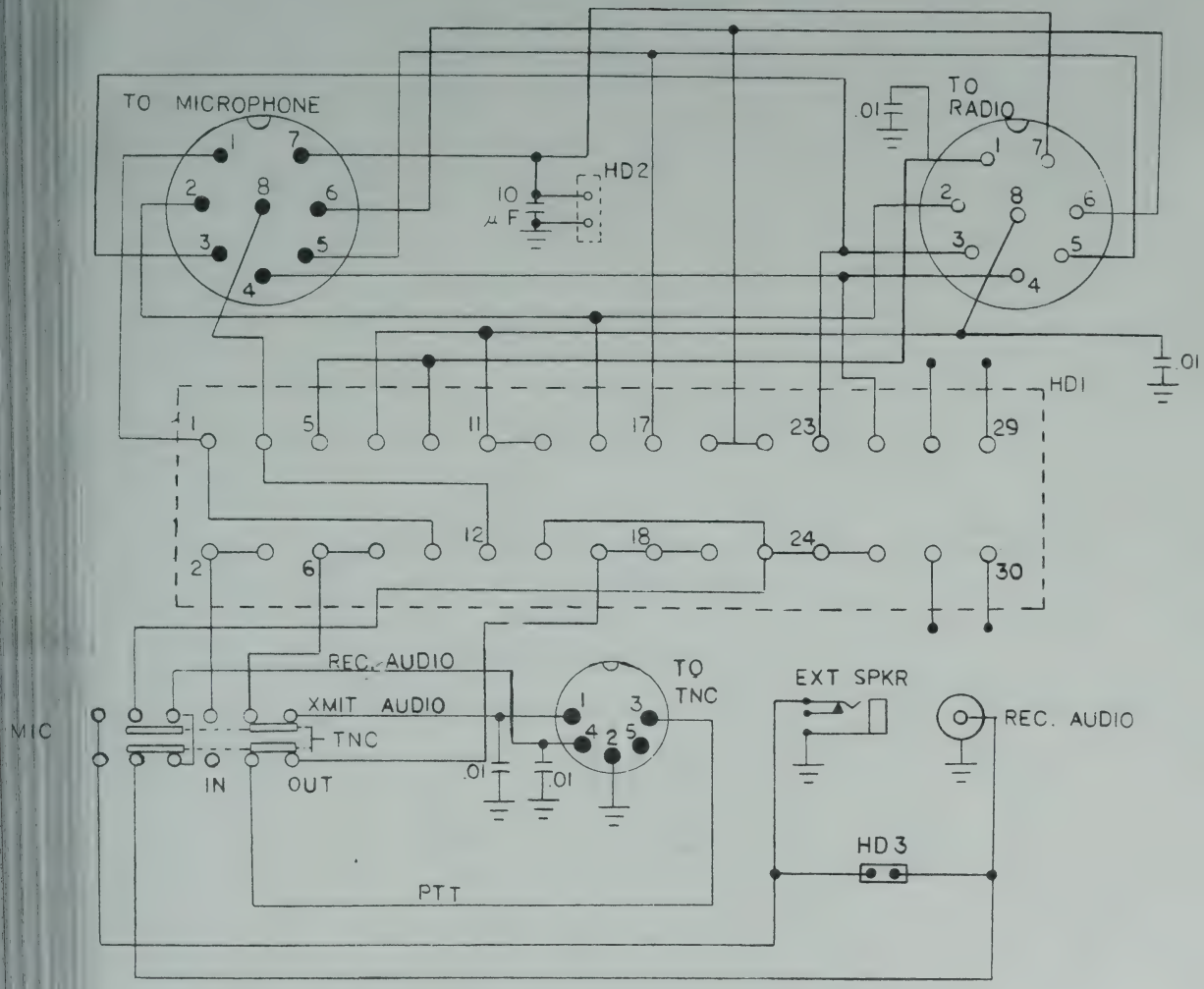


FIGURE 3 - 1272B SCHEMATIC

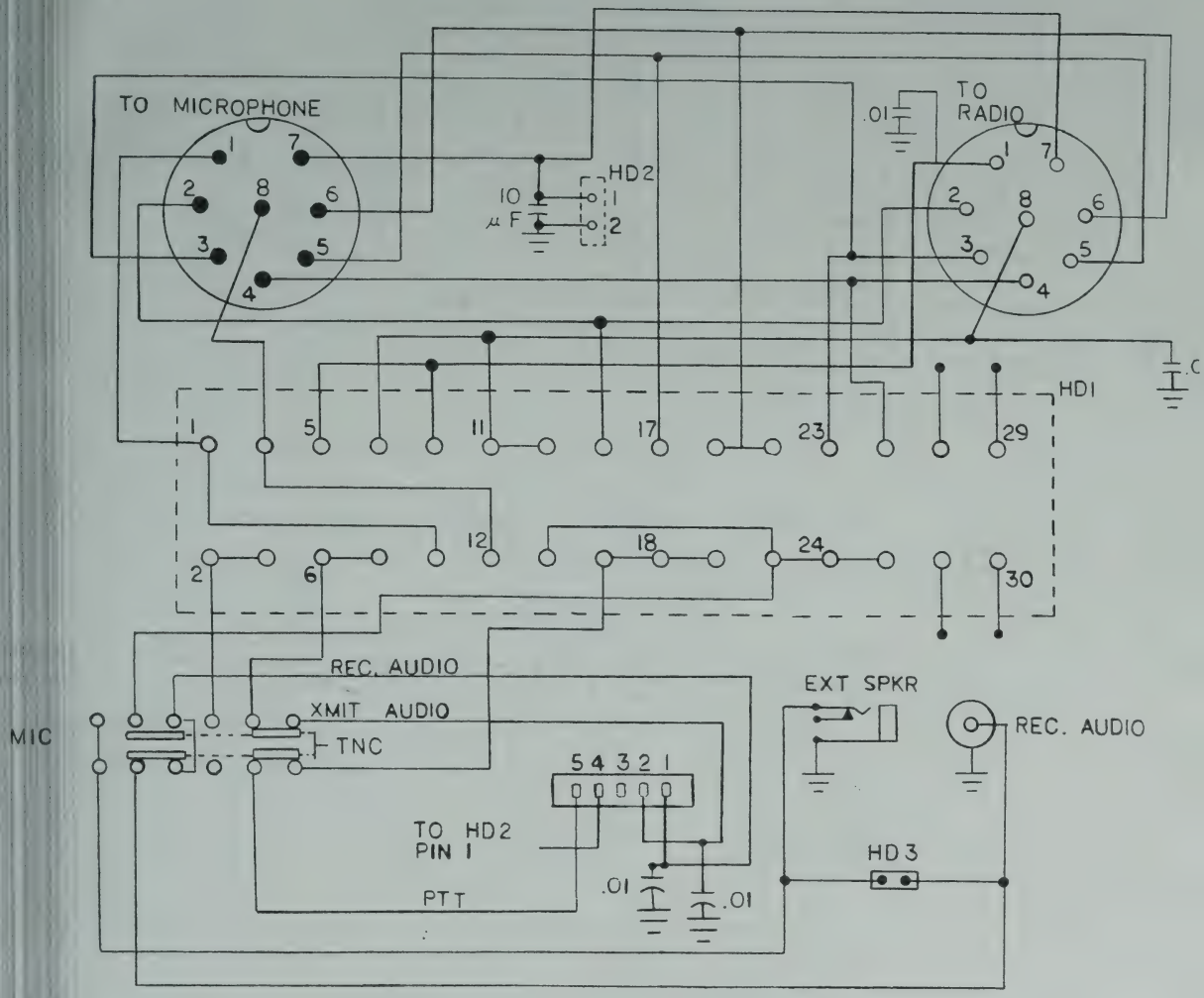


FIGURE 4 - 1272BX SCHEMATIC

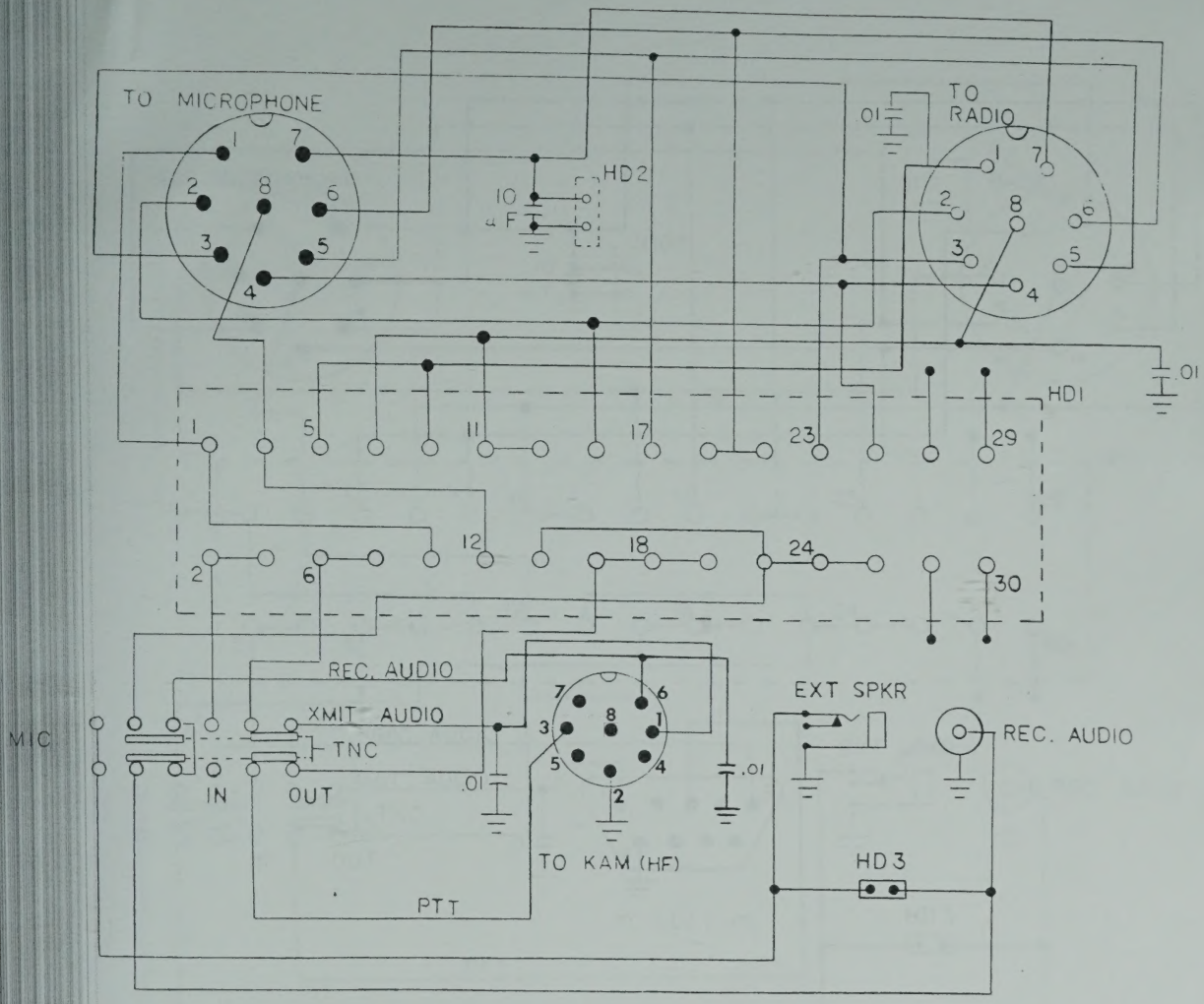


FIGURE 5 - 1272BYH (HF)

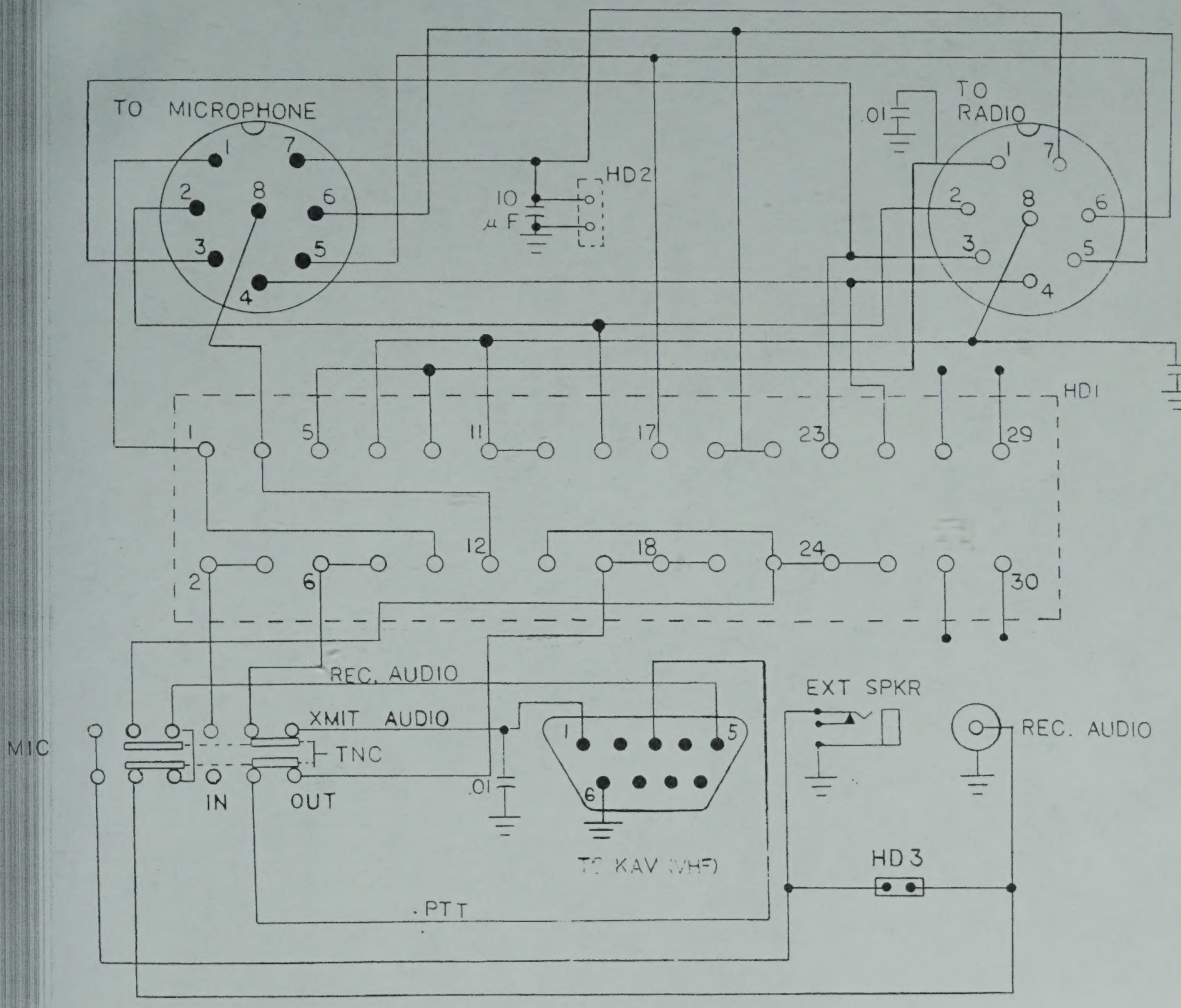


FIGURE 6 — 1272 BYV (VHF)